

SEQUENCE LISTING

<110> Saito, Tadao
Shimosato, Takeshi
Kitazawa, Haruki

<120> Utilization of Cell Forcibly Expressing Toll-Like Receptor

<130> SPO-124

<140> US 10/561,022

<141> 2005-12-16

<150> PCT/JP2004/002920

<151> 2004-03-05

<150> JP 2003-172132

<151> 2003-06-17

<160> 33

<170> PatentIn version 3.1

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Cys Glu Leu Gln Pro His Gly Leu Val Asn Cys Asn Trp Leu Phe Leu
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His Leu Ala Pro Ser Phe Gly His Leu Arg Ser Leu Lys Glu Leu Asp	355	360	365	
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Ala Ile Thr Arg Glu Val Asp Gly Arg Glu Arg Val Trp Leu Pro Ser	435	440	445	
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Arg Asn Leu Ala Pro Arg Pro Leu Asp Thr Leu Arg Ser Glu Asp Phe	450	455	460	465
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Asn Leu Val Thr Ile Gln Ser Glu Met Phe Ala Arg Leu Ser Arg Leu	485	490	495	
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Leu Lys Ser Val Pro His Phe Ser Ala Ala Ala Pro Arg Ala Asn Val
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Thr Ser Leu Ser Leu Leu Ser Asn Arg Ile His His Leu His Asp Ser
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Asp Phe Val His Leu Ser Ser Leu Arg Thr Leu Asn Leu Lys Trp Asn
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Cys Pro Pro Ala Gly Leu Ser Pro Met His Phe Pro Cys His Met Thr
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Leu Ser Tyr Asn Ser Ile Thr Thr Val Pro Ala Leu Pro Asp Ser Leu

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Cys Tyr Tyr Lys Asn Pro Cys Gln Gly Ala Leu Glu Val Val Pro Gly				
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Met Gly Phe Cys Arg Ser Ala

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10

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ttg	gct	gtg	ccc	acc	ctg	gaa	gag	cta	aac	ctg	agc	tac	aac	aac	atc	1039
Leu	Ala	Val	Pro	Thr	Leu	Glu	Glu	Leu	Asn	Leu	Ser	Tyr	Asn	Asn	Ile	
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Met	Thr	Val	Pro	Ala	Leu	Pro	Lys	Ser	Leu	Ile	Ser	Leu	Ser	Leu	Ser	
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His	Thr	Asn	Ile	Leu	Met	Leu	Asp	Ser	Ala	Ser	Leu	Ala	Gly	Leu	His	
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gcc	ctg	cgc	ttc	cta	ttc	atg	gac	ggc	aac	tgt	tat	tac	aag	aac	ccc	1183
Ala	Leu	Arg	Phe	Leu	Phe	Met	Asp	Gly	Asn	Cys	Tyr	Tyr	Lys	Asn	Pro	
		170					175					180				
tgc	agg	cag	gca	ctg	gag	gtg	gcc	ccg	ggc	gcc	ctc	ctt	ggc	ctg	ggc	1231
Cys	Arg	Gln	Ala	Leu	Glu	Val	Ala	Pro	Gly	Ala	Leu	Leu	Gly	Leu	Gly	
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aac	ctc	acc	cac	ctg	tca	ctc	aag	tac	aac	aac	ctc	act	gtg	gtg	ccc	1279
Asn	Leu	Thr	His	Leu	Ser	Leu	Lys	Tyr	Asn	Asn	Leu	Thr	Val	Val	Pro	
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cgc	aac	ctg	cct	tcc	agc	ctg	gag	tat	ctg	ctg	ttg	tcc	tac	aac	cgc	1327
Arg	Asn	Leu	Pro	Ser	Ser	Leu	Glu	Tyr	Leu	Leu	Leu	Ser	Tyr	Asn	Arg	
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Ile	Val	Lys	Leu	Ala	Pro	Glu	Asp	Leu	Ala	Asn	Leu	Thr	Ala	Leu	Arg	
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gtg	ctc	gat	gtg	ggc	gga	aat	tgc	cgc	cgc	tgc	gac	cac	gct	ccc	aac	1423
Val	Leu	Asp	Val	Gly	Gly	Asn	Cys	Arg	Arg	Cys	Asp	His	Ala	Pro	Asn	
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ccc	tgc	atg	gag	tgc	cct	cgt	cac	ttc	ccc	cag	cta	cat	ccc	gat	acc	1471
Pro	Cys	Met	Glu	Cys	Pro	Arg	His	Phe	Pro	Gln	Leu	His	Pro	Asp	Thr	
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Phe	Ser	His	Leu	Ser	Arg	Leu	Glu	Gly	Leu	Val	Leu	Lys	Asp	Ser	Ser	
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ctc	tcc	tgg	ctg	aat	gcc	agt	tgg	ttc	cgt	ggg	ctg	gga	aac	ctc	cga	1567
Leu	Ser	Trp	Leu	Asn	Ala	Ser	Trp	Phe	Arg	Gly	Leu	Gly	Asn	Leu	Arg	

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aag gcc ttc cag ggc cta aca cag ctg cgc aag ctt aac ctg tcc ttc Lys Ala Phe Gln Gly Leu Thr Gln Leu Arg Lys Leu Asn Leu Ser Phe 330 335 340			1663
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ctg acc ggt ctg cag gtg cta gac ctg tcc cac aat aag ctg gac ctc Leu Thr Gly Leu Gln Val Leu Asp Leu Ser His Asn Lys Leu Asp Leu			2239

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cac aac aac atc cac agc caa gtg tcc cag cag ctc tgc agt acg tcg His Asn Asn Ile His Ser Gln Val Ser Gln Gln Leu Cys Ser Thr Ser 585 590 595				2431
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tac ctg gcc ttc ttt aag tgg tgg agc ctc cac ttc ctg ccc aaa ctg Tyr Leu Ala Phe Phe Lys Trp Trp Ser Leu His Phe Leu Pro Lys Leu 665 670 675				2671
gaa gtc ctc gac ctg gca gga aac cag ctg aag gcc ctg acc aat ggc Glu Val Leu Asp Leu Ala Gly Asn Gln Leu Lys Ala Leu Thr Asn Gly 680 685 690 695				2719
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Arg Gln Arg Leu Cys Arg Gln Ser Val Leu Leu Trp Pro His Gln Pro			
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Ser Gly Gln Arg Ser Phe Trp Ala Gln Leu Gly Met Ala Leu Thr			
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Thr Ala Glu			
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Leu Pro Cys Glu Leu Gln Pro His Gly Leu Val Asn Cys Asn Trp Leu			
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Phe Leu Lys Ser Val Pro His Phe Ser Met Ala Ala Pro Arg Gly Asn			
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Val Thr Ser Leu Ser Leu Ser Ser Asn Arg Ile His His Leu His Asp			
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Ser Asp Phe Ala His Leu Pro Ser Leu Arg His Leu Asn Leu Lys Trp			
	85	90	95
Asn Cys Pro Pro Val Gly Leu Ser Pro Met His Phe Pro Cys His Met			
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Thr Ile Glu Pro Ser Thr Phe Leu Ala Val Pro Thr Leu Glu Glu Leu			
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Asn Leu Ser Tyr Asn Asn Ile Met Thr Val Pro Ala Leu Pro Lys Ser			
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 145 150 155 160
 Ala Ser Leu Ala Gly Leu His Ala Leu Arg Phe Leu Phe Met Asp Gly
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 260 265 270
 Pro Gln Leu His Pro Asp Thr Phe Ser His Leu Ser Arg Leu Glu Gly
 275 280 285
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 Arg Gly Leu Gly Asn Leu Arg Val Leu Asp Leu Ser Glu Asn Phe Leu
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Gln Pro Gly Asp Leu Ala Pro Ala Pro Val Asp Thr Pro Ser Ser Glu
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 Asp Phe Arg Pro Asn Cys Ser Thr Leu Asn Phe Thr Leu Asp Leu Ser
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 Ser His Asn Lys Leu Asp Leu Tyr His Glu His Ser Phe Thr Glu Leu
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 Pro Arg Leu Glu Ala Leu Asp Leu Ser Tyr Asn Ser Gln Pro Phe Gly
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 Met Gln Gly Val Gly His Asn Phe Ser Phe Val Ala His Leu Arg Thr
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Pro	Ser	Arg	Val	Lys	Cys	Gly	Ser	Pro	Gly	Gln	Leu	Gln	Gly	Leu	Ser
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Ile	Phe	Ala	Gln	Asp	Leu	Arg	Leu	Cys	Leu	Asp	Glu	Ala	Leu	Ser	Trp
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Ser	Ala	Val	Ala	Asp	Trp	Val	Tyr	Asn	Glu	Leu	Arg	Gly	Gln	Leu	Glu
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Trp	Leu	Pro	Gly	Lys	Thr	Leu	Phe	Glu	Asn	Leu	Trp	Ala	Ser	Val	Tyr
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Phe Leu Lys Ser Val Pro Arg Phe Ser Ala Ala Ala Ser Cys Ser Asn
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Ile Thr Arg Leu Ser Leu Ile Ser Asn Arg Ile His His Leu His Asn
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Ser Asp Phe Val His Leu Ser Asn Leu Arg Gln Leu Asn Leu Lys Trp
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Asn Cys Pro Pro Thr Gly Leu Ser Pro Leu His Phe Ser Cys His Met
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Asn Cys Tyr Tyr Lys Asn Pro Cys Thr Gly Ala Val Lys Val Thr Pro
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Gly Ala Leu Leu Gly Leu Ser Asn Leu Thr His Leu Ser Leu Lys Tyr
195 200 205

Asn Asn Leu Thr Lys Val Pro Arg Gln Leu Pro Pro Ser Leu Glu Tyr
210 215 220

Leu Leu Val Ser Tyr Asn Leu Ile Val Lys Leu Gly Pro Glu Asp Leu
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Ala Asn Leu Thr Ser Leu Arg Val Leu Asp Val Gly Gly Asn Cys Arg
245 250 255

Arg Cys Asp His Ala Pro Asn Pro Cys Ile Glu Cys Gly Gln Lys Ser
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 Leu His Leu His Pro Glu Thr Phe His His Leu Ser His Leu Glu Gly
 275 280 285
 Leu Val Leu Lys Asp Ser Ser Leu His Thr Leu Asn Ser Ser Trp Phe
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 Gln Gly Leu Val Asn Leu Ser Val Leu Asp Leu Ser Glu Asn Phe Leu
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 Tyr Glu Ser Ile Asn His Thr Asn Ala Phe Gln Asn Leu Thr Arg Leu
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 Arg Lys Leu Asn Leu Ser Phe Asn Tyr Arg Lys Lys Val Ser Phe Ala
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 Arg Leu His Leu Ala Ser Ser Phe Lys Asn Leu Val Ser Leu Gln Glu
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 Leu Asn Met Asn Gly Ile Phe Phe Arg Ser Leu Asn Lys Tyr Thr Leu
 370 375 380
 Arg Trp Leu Ala Asp Leu Pro Lys Leu His Thr Leu His Leu Gln Met
 385 390 395 400
 Asn Phe Ile Asn Gln Ala Gln Leu Ser Ile Phe Gly Thr Phe Arg Ala
 405 410 415
 Leu Arg Phe Val Asp Leu Ser Asp Asn Arg Ile Ser Gly Pro Ser Thr
 420 425 430
 Leu Ser Glu Ala Thr Pro Glu Glu Ala Asp Asp Ala Glu Gln Glu Glu
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 Leu Leu Ser Ala Asp Pro His Pro Ala Pro Leu Ser Thr Pro Ala Ser
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 Lys Asn Phe Met Asp Arg Cys Lys Asn Phe Lys Phe Thr Met Asp Leu
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 Ser Arg Asn Asn Leu Val Thr Ile Lys Pro Glu Met Phe Val Asn Leu
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 Ser Arg Leu Gln Cys Leu Ser Leu Ser His Asn Ser Ile Ala Gln Ala
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 Val Asn Gly Ser Gln Phe Leu Pro Leu Thr Asn Leu Gln Val Leu Asp
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 Leu Ser His Asn Lys Leu Asp Leu Tyr His Trp Lys Ser Phe Ser Glu
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 Leu Pro Gln Leu Gln Ala Leu Asp Leu Gly Tyr Asn Ser Gln Pro Phe

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Ser Ser His Leu Asn Ser Asn Ser Val Arg Phe Leu Asp Phe Ser Gly						
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Asn Gly Met Gly Arg Met Trp Asp Glu Gly Gly Leu Tyr Leu His Phe						
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Phe Gln Gly Leu Ser Gly Leu Leu Lys Leu Asp Leu Ser Gln Asn Asn						
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Leu His Ile Leu Arg Pro Gln Asn Leu Asp Asn Leu Pro Lys Ser Leu						
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Lys Leu Leu Ser Leu Arg Asp Asn Tyr Leu Ser Phe Phe Asn Trp Thr						
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Ser Leu Ser Phe Leu Pro Asn Leu Glu Val Leu Asp Leu Ala Gly Asn						
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Gln Leu Lys Ala Leu Thr Asn Gly Thr Leu Pro Asn Gly Thr Leu Leu						
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Gln Lys Leu Asp Val Ser Ser Asn Ser Ile Val Ser Val Val Pro Ala						
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Phe Phe Ala Leu Ala Val Glu Leu Lys Glu Val Asn Leu Ser His Asn						
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Ile Leu Lys Thr Val Asp Arg Ser Trp Phe Gly Pro Ile Val Met Asn						
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Leu Thr Val Leu Asp Val Arg Ser Asn Pro Leu His Cys Ala Cys Gly						
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Ala Ala Phe Val Asp Leu Leu Leu Glu Val Gln Thr Lys Val Pro Gly						
		770		775		780
Leu Ala Asn Gly Val Lys Cys Gly Ser Pro Gly Gln Leu Gln Gly Arg						
		785		790		795
Ser Ile Phe Ala Gln Asp Leu Arg Leu Cys Leu Asp Glu Val Leu Ser						
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Trp Asp Cys Phe Gly Leu Ser Leu Leu Ala Val Ala Val Gly Met Val						
		820		825		830
Val Pro Ile Leu His His Leu Cys Gly Trp Asp Val Trp Tyr Cys Phe						
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His Leu Cys Leu Ala Trp Leu Pro Leu Leu Ala Arg Ser Arg Arg Ser
 850 855 860
 Ala Gln Ala Leu Pro Tyr Asp Ala Phe Val Val Phe Asp Lys Ala Gln
 865 870 875 880
 Ser Ala Val Ala Asp Trp Val Tyr Asn Glu Leu Arg Val Arg Leu Glu
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 Gly Arg Arg Gly Arg Arg Ala Leu Arg Leu Cys Leu Glu Asp Arg Asp
 900 905 910
 Trp Leu Pro Gly Gln Thr Leu Phe Glu Asn Leu Trp Ala Ser Ile Tyr
 915 920 925
 Gly Ser Arg Lys Thr Leu Phe Val Leu Ala His Thr Asp Arg Val Ser
 930 935 940
 Gly Leu Leu Arg Thr Ser Phe Leu Leu Ala Gln Gln Arg Leu Leu Glu
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 Asp Arg Lys Asp Val Val Val Leu Val Ile Leu Arg Pro Asp Ala His
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 Arg Ser Arg Tyr Val Arg Leu Arg Gln Arg Leu Cys Arg Gln Ser Val
 980 985 990
 Leu Phe Trp Pro Gln Gln Pro Asn Gly Gln Gly Gly Phe Trp Ala Gln
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Met Gly Pro Cys His Gly Ala Leu His
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ccc ctg tct ctc ctg gtg cag gct gcc gcg ctg gcc gtg gcc ctg gcc 162
Pro Leu Ser Leu Leu Val Gln Ala Ala Ala Leu Ala Val Ala Leu Ala
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Gln Gly Thr Leu Pro Ala Phe Leu Pro Cys Glu Leu Gln Arg His Gly
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Leu Val Asn Cys Asp Trp Leu Phe Leu Lys Ser Val Pro His Phe Ser
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Ala Ala Ala Pro Arg Gly Asn Val Thr Ser Leu Ser Leu Tyr Ser Asn
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cgc atc cac cac ctc cac gac tcc gac ttt gtc cac ctg tcc agc ctg 354
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75 80 85

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Arg Arg Leu Asn Leu Lys Trp Asn Cys Pro Pro Ala Ser Leu Ser Pro
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Met His Phe Pro Cys His Met Thr Ile Glu Pro His Thr Phe Leu Ala
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cag gct gca gtg ccc ggc ctg cca ggc cac gtc aag tgt ggc agt cca Gln Ala Ala Val Pro Gly Leu Pro Gly His Val Lys Cys Gly Ser Pro 780 785 790	2466
ggc cag ctc cag ggc cgc agc atc ttt gcg cag gat ctg cgc ctc tgc Gly Gln Leu Gln Gly Arg Ser Ile Phe Ala Gln Asp Leu Arg Leu Cys 795 800 805	2514
ctg gat gag gcc ctc tcc tgg gac tgt ttt ggc ctc tcg ctg ctg acc Leu Asp Glu Ala Leu Ser Trp Asp Cys Phe Gly Leu Ser Leu Leu Thr 810 815 820 825	2562
gtg gcc ctg ggc ctg gcc gtg ccc atg ctg cac cac ctc tgt ggc tgg Val Ala Leu Gly Leu Ala Val Pro Met Leu His His Leu Cys Gly Trp 830 835 840	2610
gac ctc tgg tac tgc ttc cac ctg tgc ctg gcc tgg ctg ccc cgg cgg Asp Leu Trp Tyr Cys Phe His Leu Cys Leu Ala Trp Leu Pro Arg Arg 845 850 855	2658
ggg cgg cgg cgg ggc gcg gat gcc ctg ccc tac gat gcc ttt gtg gtc Gly Arg Arg Arg Gly Ala Asp Ala Leu Pro Tyr Asp Ala Phe Val Val 860 865 870	2706
ttc gac aag gca cag agc gcg gtg gcc gac tgg gtg tac aac gag ctg Phe Asp Lys Ala Gln Ser Ala Val Ala Asp Trp Val Tyr Asn Glu Leu 875 880 885	2754

cgg gta cgg cta gag gag cgc cgt gga cgc cga gcg ctc cgc ctg tgc 2802
 Arg Val Arg Leu Glu Glu Arg Arg Gly Arg Arg Ala Leu Arg Leu Cys
 890 895 900 905

 ctg gag gaa cgt gac tgg cta ccc ggt aaa acg ctc ttt gag aac ctg 2850
 Leu Glu Glu Arg Asp Trp Leu Pro Gly Lys Thr Leu Phe Glu Asn Leu
 910 915 920

 tgg gcc tca gtt tac agc agc cgc aag atg ctg ttt gtg ctg gcc cac 2898
 Trp Ala Ser Val Tyr Ser Ser Arg Lys Met Leu Phe Val Leu Ala His
 925 930 935

 aca gac agg gtc agc ggc ctc ttg cgc gcc agc ttt ctg ctg gcc cag 2946
 Thr Asp Arg Val Ser Gly Leu Leu Arg Ala Ser Phe Leu Leu Ala Gln
 940 945 950

 cag cgc ctg ctg gag gac cgc aag gac gtt gtg gtg ctg gtg atc ctg 2994
 Gln Arg Leu Leu Glu Asp Arg Lys Asp Val Val Val Leu Val Ile Leu
 955 960 965

 cgc ccc gac gcc cac cgc tcc cgc tat gtg cgg ctg cgc cag cgc ctc 3042
 Arg Pro Asp Ala His Arg Ser Arg Tyr Val Arg Leu Arg Gln Arg Leu
 970 975 980 985

 tgc cgc cag agc gtc ctc ctc tgg ccc cac cag ccc agt ggc cag cgc 3090
 Cys Arg Gln Ser Val Leu Leu Trp Pro His Gln Pro Ser Gly Gln Arg
 990 995 1000

 agc ttc tgg gcc cag ctg ggc acg gcc ctg acc agg gac aac cag 3135
 Ser Phe Trp Ala Gln Leu Gly Thr Ala Leu Thr Arg Asp Asn Gln
 1005 1010 1015

 cac ttc tat aac cag aac ttc tgc cgg ggc ccc acg acg gca gag 3180
 His Phe Tyr Asn Gln Asn Phe Cys Arg Gly Pro Thr Thr Ala Glu
 1020 1025 1030

 tga cgcgccagca cccaagcct cctacacctt gcctgtctgc ctgggatgcc 3233

 gggcctgctg gcctgcaac accactgctc tgccctccca actcccaccc ctggcatata 3293

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<211> 1031

<212> PRT

<213> Felis Catus

<220>

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<222> (622)..(622)

<223> The 'Xaa' at location 622 stands for His, Arg, Pro, or Leu.

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Ala Ala Ala Leu Ala Val Ala Leu Ala Gln Gly Thr Leu Pro Ala Phe
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 Leu Pro Cys Glu Leu Gln Arg His Gly Leu Val Asn Cys Asp Trp Leu
 35 40 45
 Phe Leu Lys Ser Val Pro His Phe Ser Ala Ala Ala Pro Arg Gly Asn
 50 55 60
 Val Thr Ser Leu Ser Leu Tyr Ser Asn Arg Ile His His Leu His Asp
 65 70 75 80
 Ser Asp Phe Val His Leu Ser Ser Leu Arg Arg Leu Asn Leu Lys Trp
 85 90 95
 Asn Cys Pro Pro Ala Ser Leu Ser Pro Met His Phe Pro Cys His Met
 100 105 110
 Thr Ile Glu Pro His Thr Phe Leu Ala Val Pro Thr Leu Glu Glu Leu
 115 120 125
 Asn Leu Ser Tyr Asn Ser Ile Thr Thr Val Pro Ala Leu Pro Ser Ser
 130 135 140
 Leu Val Ser Leu Ser Leu Ser Arg Thr Asn Ile Leu Val Leu Asp Pro
 145 150 155 160
 Ala Asn Leu Ala Gly Leu His Ser Leu Arg Phe Leu Phe Leu Asp Gly
 165 170 175
 Asn Cys Tyr Tyr Lys Asn Pro Cys Pro Gln Ala Leu Gln Val Ala Pro
 180 185 190
 Gly Ala Leu Leu Gly Leu Gly Asn Leu Thr His Leu Ser Leu Lys Tyr
 195 200 205
 Asn Asn Leu Thr Ala Val Pro Arg Gly Leu Pro Pro Ser Leu Glu Tyr
 210 215 220
 Leu Leu Leu Ser Tyr Asn His Ile Ile Thr Leu Ala Pro Glu Asp Leu
 225 230 235 240
 Ala Asn Leu Thr Ala Leu Arg Val Leu Asp Val Gly Gly Asn Cys Arg
 245 250 255
 Arg Cys Asp His Ala Arg Asn Pro Cys Met Glu Cys Pro Lys Gly Phe
 260 265 270
 Pro His Leu His Pro Asp Thr Phe Ser His Leu Asn His Leu Glu Gly
 275 280 285
 Leu Val Leu Lys Asp Ser Ser Leu Tyr Asn Leu Asn Pro Arg Trp Phe
 290 295 300
 His Ala Leu Gly Asn Leu Met Val Leu Asp Leu Ser Glu Asn Phe Leu

305		310		315		320
Tyr Asp Cys Ile Thr Lys Thr Thr Ala Phe Gln Gly Leu Ala Gln Leu						
		325		330		335
Arg Arg Leu Asn Leu Ser Phe Asn Tyr His Lys Lys Val Ser Phe Ala						
		340		345		350
His Leu His Leu Ala Pro Ser Phe Gly Ser Leu Leu Ser Leu Gln Gln						
		355		360		365
Leu Asp Met His Gly Ile Phe Phe Arg Ser Leu Ser Glu Thr Thr Leu						
		370		375		380
Arg Ser Leu Val His Leu Pro Met Leu Gln Ser Leu His Leu Gln Met						
		385		390		395
Asn Phe Ile Asn Gln Ala Gln Leu Ser Ile Phe Gly Ala Phe Pro Gly						
		405		410		415
Leu Arg Tyr Val Asp Leu Ser Asp Asn Arg Ile Ser Gly Ala Met Glu						
		420		425		430
Leu Ala Ala Ala Thr Gly Glu Val Asp Gly Gly Glu Arg Val Arg Leu						
		435		440		445
Pro Ser Gly Asp Leu Ala Leu Gly Pro Pro Gly Thr Pro Ser Ser Glu						
		450		455		460
Gly Phe Met Pro Gly Cys Lys Thr Leu Asn Phe Thr Leu Asp Leu Ser						
		465		470		475
Arg Asn Asn Leu Val Thr Ile Gln Pro Glu Met Phe Ala Arg Leu Ser						
		485		490		495
Arg Leu Gln Cys Leu Leu Leu Ser Arg Asn Ser Ile Ser Gln Ala Val						
		500		505		510
Asn Gly Ser Gln Phe Met Pro Leu Thr Ser Leu Gln Val Leu Asp Leu						
		515		520		525
Ser His Asn Lys Leu Asp Leu Tyr His Gly Arg Ser Phe Thr Glu Leu						
		530		535		540
Pro Arg Leu Glu Ala Leu Asp Leu Ser Tyr Asn Ser Gln Pro Phe Ser						
		545		550		555
Met Gln Gly Val Gly His Asn Leu Ser Phe Val Ala Gln Leu Pro Ala						
		565		570		575
Leu Arg Tyr Leu Ser Leu Ala His Asn Asp Ile His Ser Arg Val Ser						
		580		585		590
Gln Gln Leu Cys Ser Ala Ser Leu Arg Ala Leu Asp Phe Ser Gly Asn						
		595		600		605

Ala Leu Ser Arg Met Trp Ala Glu Gly Asp Leu Tyr Leu Xaa Phe Phe
 610 615 620
 Arg Gly Leu Arg Ser Leu Val Arg Leu Asp Leu Ser Gln Asn Arg Leu
 625 630 635 640
 His Thr Leu Leu Pro Arg Thr Leu Asp Asn Leu Pro Lys Ser Leu Arg
 645 650 655
 Leu Leu Arg Leu Arg Asp Asn Tyr Leu Ala Phe Phe Asn Trp Ser Ser
 660 665 670
 Leu Val Leu Leu Pro Arg Leu Glu Ala Leu Asp Leu Ala Gly Asn Gln
 675 680 685
 Leu Lys Ala Leu Ser Asn Gly Ser Leu Pro Asn Gly Thr Gln Leu Gln
 690 695 700
 Arg Leu Asp Leu Ser Ser Asn Ser Ile Ser Phe Val Ala Ser Ser Phe
 705 710 715 720
 Phe Ala Leu Ala Thr Arg Leu Arg Glu Leu Asn Leu Ser Ala Asn Ala
 725 730 735
 Leu Lys Thr Val Glu Pro Ser Trp Phe Gly Ser Leu Ala Gly Thr Leu
 740 745 750
 Lys Val Leu Asp Val Thr Gly Asn Pro Leu His Cys Ala Cys Gly Ala
 755 760 765
 Ala Phe Val Asp Phe Leu Leu Glu Val Gln Ala Ala Val Pro Gly Leu
 770 775 780
 Pro Gly His Val Lys Cys Gly Ser Pro Gly Gln Leu Gln Gly Arg Ser
 785 790 795 800
 Ile Phe Ala Gln Asp Leu Arg Leu Cys Leu Asp Glu Ala Leu Ser Trp
 805 810 815
 Asp Cys Phe Gly Leu Ser Leu Leu Thr Val Ala Leu Gly Leu Ala Val
 820 825 830
 Pro Met Leu His His Leu Cys Gly Trp Asp Leu Trp Tyr Cys Phe His
 835 840 845
 Leu Cys Leu Ala Trp Leu Pro Arg Arg Gly Arg Arg Arg Gly Ala Asp
 850 855 860
 Ala Leu Pro Tyr Asp Ala Phe Val Val Phe Asp Lys Ala Gln Ser Ala
 865 870 875 880
 Val Ala Asp Trp Val Tyr Asn Glu Leu Arg Val Arg Leu Glu Glu Arg
 885 890 895
 Arg Gly Arg Arg Ala Leu Arg Leu Cys Leu Glu Glu Arg Asp Trp Leu
 900 905 910

Pro Gly Lys Thr Leu Phe Glu Asn Leu Trp Ala Ser Val Tyr Ser Ser
 915 920 925

Arg Lys Met Leu Phe Val Leu Ala His Thr Asp Arg Val Ser Gly Leu
 930 935 940

Leu Arg Ala Ser Phe Leu Leu Ala Gln Gln Arg Leu Leu Glu Asp Arg
 945 950 955 960

Lys Asp Val Val Val Leu Val Ile Leu Arg Pro Asp Ala His Arg Ser
 965 970 975

Arg Tyr Val Arg Leu Arg Gln Arg Leu Cys Arg Gln Ser Val Leu Leu
 980 985 990

Trp Pro His Gln Pro Ser Gly Gln Arg Ser Phe Trp Ala Gln Leu Gly
 995 1000 1005

Thr Ala Leu Thr Arg Asp Asn Gln His Phe Tyr Asn Gln Asn Phe
 1010 1015 1020

Cys Arg Gly Pro Thr Thr Ala Glu
 1025 1030

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aggcgcagtg cagagggtt 19

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